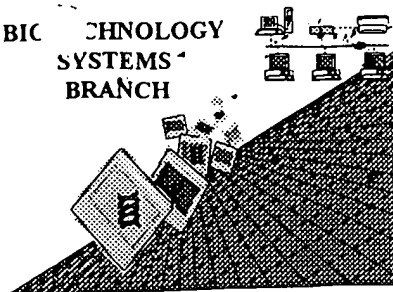


RAW SEQUENCE LISTING ERROR REPORT

BIC TECHNOLOGY
SYSTEMS
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/581,651

Source: AU 1642

Date Processed by STIC: 08/02/2001

RECEIVED

SEP 17 2001

TECH CENTER 1600/2900

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 09/581,651

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped

 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences
 (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
 <210> sequence id number
 <400> sequence id number
 000
- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
 In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 Invalid <213>
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 ✓ Use of <220> Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
 Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

AMC - Biotechnology Systems Branch - 06/04/2001

The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

1642

RAW SEQUENCE LISTING

DATE: 08/02/2001

PATENT APPLICATION: US/09/581,651

TIME: 17:26:52

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\08022001\I581651.raw

Does Not Comply
Corrected Diskette Needed

See page 6 of 7A

```

4 <110> APPLICANT: Schor, Seth Laurence
5   Schor, Ana Maria
7 <120> TITLE OF INVENTION: POLYPEPTIDES, POLYNUCLEOTIDES AND USES
8   THEREOF
10 <130> FILE REFERENCE: 350013-72
12 <140> CURRENT APPLICATION NUMBER: 09/581,651
13 <141> CURRENT FILING DATE: 2000-10-10
15 <160> NUMBER OF SEQ ID NOS: 15
17 <170> SOFTWARE: FastSEQ for Windows Version 3.0
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 660
21 <212> TYPE: PRT
22 <213> ORGANISM: Human
24 <400> SEQUENCE: 1
25 Asn Leu Val Ala Thr Cys Leu Pro Val Arg Ala Ser Leu Pro His Arg
26   1           5           10           15
27 Leu Asn Met Leu Arg Gly Pro Gly Pro Gly Leu Leu Leu Leu Ala Val
28   20           25           30
29 Gln Cys Leu Gly Thr Ala Val Pro Ser Thr Gly Ala Ser Lys Ser Lys
30   35           40           45
31 Arg Gln Ala Gln Gln Met Val Gln Pro Gln Ser Pro Val Ala Val Ser
32   50           55           60
33 Gln Ser Lys Pro Gly Cys Tyr Asp Asn Gly Lys His Tyr Gln Ile Asn
34   65           70           75           80
35 Gln Gln Trp Glu Arg Thr Tyr Leu Gly Asn Ala Leu Val Cys Thr Cys
36   85           90           95
37 Tyr Gly Gly Ser Arg Gly Phe Asn Cys Glu Ser Lys Pro Glu Ala Glu
38   100          105          110
39 Glu Thr Cys Phe Asp Lys Tyr Thr Gly Asn Thr Tyr Arg Val Gly Asp
40   115          120          125
41 Thr Tyr Glu Arg Pro Lys Asp Ser Met Ile Trp Asp Cys Thr Cys Ile
42   130          135          140
43 Gly Ala Gly Arg Gly Arg Ile Ser Cys Thr Ile Ala Asn Arg Cys His
44   145          150          155          160
45 Glu Gly Gly Gln Ser Tyr Lys Ile Gly Asp Thr Trp Arg Arg Pro His
46   165          170          175
47 Glu Thr Gly Gly Tyr Met Leu Glu Cys Val Cys Leu Gly Asn Gly Lys
48   180          185          190
49 Gly Glu Trp Thr Cys Lys Pro Ile Ala Glu Lys Cys Phe Asp His Ala
50   195          200          205
51 Ala Gly Thr Ser Tyr Val Val Gly Glu Thr Trp Glu Lys Pro Tyr Gln
52   210          215          220
53 Gly Trp Met Met Val Asp Cys Thr Cys Leu Gly Glu Gly Ser Gly Arg
54   225          230          235          240
55 Ile Thr Cys Thr Ser Arg Asn Arg Cys Asn Asp Gln Asp Thr Arg Thr
56   245          250          255
57 Ser Tyr Arg Ile Gly Asp Thr Trp Ser Lys Lys Asp Asn Arg Gly Asn

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/581,651

DATE: 08/02/2001

TIME: 17:26:52

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\08022001\I581651.raw

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58          260          265          270
59 Leu Leu Gln Cys Ile Cys Thr Gly Asn Gly Arg Gly Glu Trp Lys Cys
60          275          280          285
61 Glu Arg His Thr Ser Val Gln Thr Thr Ser Ser Gly Ser Gly Pro Phe
62          290          295          300
63 Thr Asp Val Arg Ala Ala Val Tyr Gln Pro Gln Pro His Pro Gln Pro
64          305          310          315          320
65 Pro Pro Tyr Gly His Cys Val Thr Asp Ser Gly Val Val Tyr Ser Val
66          325          330          335
67 Gly Met Gln Trp Leu Lys Thr Gln Gly Asn Lys Gln Met Leu Cys Thr
68          340          345          350
69 Cys Leu Gly Asn Gly Val Ser Cys Gln Glu Thr Ala Val Thr Gln Thr
70          355          360          365
71 Tyr Gly Gly Asn Ser Asn Gly Glu Pro Cys Val Leu Pro Phe Thr Tyr
72          370          375          380
73 Asn Asp Arg Thr Asp Ser Thr Thr Ser Asn Tyr Glu Gln Asp Gln Lys
74          385          390          395          400
75 Tyr Ser Phe Cys Thr Asp His Thr Val Leu Val Gln Thr Arg Gly Gly
76          405          410          415
77 Asn Ser Asn Gly Ala Leu Cys His Phe Pro Phe Leu Tyr Asn Asn His
78          420          425          430
79 Asn Tyr Thr Asp Cys Thr Ser Glu Gly Arg Arg Asp Asn Met Lys Trp
80          435          440          445
81 Cys Gly Thr Thr Gln Asn Tyr Asp Ala Asp Gln Lys Phe Gly Phe Cys
82          450          455          460
83 Pro Met Ala Ala His Glu Glu Ile Cys Thr Thr Asn Glu Gly Val Met
84          465          470          475          480
85 Tyr Arg Ile Gly Asp Gln Trp Asp Lys Gln His Asp Met Gly His Met
86          485          490          495
87 Met Arg Cys Thr Cys Val Gly Asn Gly Arg Gly Glu Trp Thr Cys Ile
88          500          505          510
89 Ala Tyr Ser Gln Leu Arg Asp Gln Cys Ile Val Asp Asp Ile Thr Tyr
90          515          520          525
91 Asn Val Asn Asp Thr Phe His Lys Arg His Glu Glu Gly His Met Leu
92          530          535          540
93 Asn Cys Thr Cys Phe Gly Gln Gly Arg Gly Arg Trp Lys Cys Asp Pro
94          545          550          555          560
95 Val Asp Gln Cys Gln Asp Ser Glu Thr Gly Thr Phe Tyr Gln Ile Gly
96          565          570          575
97 Asp Ser Trp Glu Lys Tyr Val His Gly Val Arg Tyr Gln Cys Tyr Cys
98          580          585          590
99 Tyr Gly Arg Gly Ile Gly Glu Trp His Cys Gln Pro Leu Gln Thr Tyr
100          595          600          605
101 Pro Ser Ser Ser Gly Pro Val Glu Val Phe Ile Thr Glu Thr Pro Ser
102          610          615          620
103 Gln Pro Asn Ser His Pro Ile Gln Trp Asn Ala Pro Gln Pro Ser His
104          625          630          635          640
105 Ile Ser Lys Tyr Ile Leu Arg Trp Arg Pro Val Ser Ile Pro Pro Arg
106          645          650          655

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/581,651

DATE: 08/02/2001

TIME: 17:26:52

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\08022001\I581651.raw

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107 Asn Leu Gly Tyr
108      660
110 <210> SEQ ID NO: 2
111 <211> LENGTH: 2147
112 <212> TYPE: DNA
113 <213> ORGANISM: Human
115 <400> SEQUENCE: 2
116 caaacttggt ggcaacttgc ctcccgggtgc gggcgctctct ccccccaccgt ctcaacatgc      60
117 ttaggggtcc gggggcccggtg ctgctgctgc tggccgtcca gtgcctgggg acagcggtgc      120
118 cctccacggg agcctcgaag agcaagaggc aggcctcagca aatggttcag cccaggtccc      180
119 cggtggtgt cagtcaaacg aagcccggtt gttatgacaa tggaaaacac tatcagataa      240
120 atcaacagtg ggagcggacc tacctaggca atgcgttggt ttgtacttgt tatggaggaa      300
121 gccgaggttt taactgcgag agtaaacctg aagctgaaga gacttgcttt gacaagtaca      360
122 ctgggaacac ttaccgagtg ggtgacactt atgagcgctc taaagactcc atgatctggg      420
123 actgtacctg catcggggct gggcgaggga gaataagctg taccatcgca aaccgctgcc      480
124 atgaaggggg tcagtcctac aagattggtg acacctggag gagaccacat gagactggtg      540
125 gttacatggt agagtgtgtg tgtcttggtg atggaaaagg agaattggacc tgcaagccca      600
126 tagctgagaa gtgttttgat catgctgctg ggacttccta tgtggtcgga gaaacgtggg      660
127 agaagcccta ccaaggctgg atgatggtag attgtacttg cctgggagaa ggcagcggac      720
128 gcatcacttg cacttctaga aatagatgca acgatcagga cacaaggaca tcctatagaa      780
129 ttggagacac ctggagcaag aaggataatc gaggaacact gctccagtgc atctgcacag      840
130 gcaacggccg aggagagtgg aagtgtgaga ggcacacctc tgtgcagacc acatcgagcg      900
131 gatctggccc ctccaacgat gttcgtgcag ctgtttacca accgcagcct ccccccagc      960
132 ctctcccta tggccactgt gtcacagaca gtggtgtggt ctactctgtg gggatgcagt     1020
133 ggctgaagac acaaggaaat aagcaaatgc tttgcacgtg cctgggcaac ggagtcagct     1080
134 gccaaagagac agctgtaacc cagacttacg gtggcaactc aaatggagag ccatgtgtct     1140
135 taccattcac ctacaacgac aggacggaca gcacaacttc gaattatgag caggaccaga     1200
136 aatactcttt ctgcacagac cacactgttt tggttcagac tcgaggagga aattccaatg     1260
137 gtgccttgtg ccacttcccc ttctataaca acaaccacaa ttactatgat tgcacttctg     1320
138 agggcagaag agacaacatg aagtgggtgt ggaccacaca gaactatgat gccgaccaga     1380
139 agtttgggtt ctgccccatg gctgcccacg aggaatctg cacaaccaat gaaggggtca     1440
140 tgtaccgat tggagatcag tgggataagc agcatgacat gggtcacatg atgaggtgca     1500
141 cgtgtgttgg gaatggtcgt ggggaatgga catgcattgc ctactcgag cttcgagatc     1560
142 agtgcattgt tgatgacatc acttacaatg tgaacgacac attccacaag cgtcatgaag     1620
143 aggggcacat gctgaactgt acatgcttcg gtcagggtcg gggcaggtgg aagtgtgac     1680
144 ccgtcgacca atgccaggat tcagagactg ggacgtttta tcaaattgga gattcatggg     1740
145 agaagtatgt gcatggtgtc agataccagt gctactgcta tggccgtggc attggggagt     1800
146 ggcattgcca acctttacag acctatccaa gctcaagtgg tcctgtcgaa gtatttatca     1860
147 ctgagactcc gagtcagccc aactcccacc ccattccagt gaatgcacca cagccatctc     1920
148 acatttccaa gtacattctc aggtggagac ctgtgagtat cccaccaga aaccttgat     1980
149 actgagtctc ctaatcttat caattctgat ggtttctttt tttcccagct tttgagccaa     2040
150 caactctgat taactattcc tatagcattt actatatttg tttagtgaac aaacaatatg     2100
151 tggtcatta aattgacttg tagactgaaa aaaaaaaaaa aaaaaaa      2147
153 <210> SEQ ID NO: 3
154 <211> LENGTH: 20
155 <212> TYPE: PRT
156 <213> ORGANISM: Human
158 <400> SEQUENCE: 3
159 Ile Ser Lys Tyr Ile Leu Arg Trp Arg Pro Val Ser Ile Pro Pro Arg

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/581,651

DATE: 08/02/2001

TIME: 17:26:52

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\08022001\I581651.raw

```

160      1              5              10              15
161  Asn Leu Gly Tyr
162              20
164 <210> SEQ ID NO: 4
165 <211> LENGTH: 21
166 <212> TYPE: PRT
167 <213> ORGANISM: Human
169 <400> SEQUENCE: 4
170  Gln Gln Trp Glu Arg Thr Tyr Leu Gly Asn Ala Leu Val Cys Thr Cys
171      1              5              10              15
172  Tyr Gly Gly Ser Arg
173              20
175 <210> SEQ ID NO: 5
176 <211> LENGTH: 23
177 <212> TYPE: PRT
178 <213> ORGANISM: Human
180 <400> SEQUENCE: 5
181  Pro Cys Val Leu Pro Phe Thr Tyr Asn Asp Arg Thr Asp Ser Thr Thr
182      1              5              10              15
183  Ser Asn Tyr Glu Gln Asp Gln
184              20
186 <210> SEQ ID NO: 6
187 <211> LENGTH: 20
188 <212> TYPE: PRT
189 <213> ORGANISM: Human
191 <400> SEQUENCE: 6
192  Thr Asp His Thr Val Leu Val Gln Thr Arg Gly Gly Asn Ser Asn Gly
193      1              5              10              15
194  Ala Leu Cys His
195              20
197 <210> SEQ ID NO: 7
198 <211> LENGTH: 21
199 <212> TYPE: PRT
200 <213> ORGANISM: Human
202 <400> SEQUENCE: 7
203  Val Gly Asn Gly Arg Gly Glu Trp Thr Cys Ile Ala Tyr Ser Gln Leu
204      1              5              10              15
205  Arg Asp Gln Cys Ile
206              20
208 <210> SEQ ID NO: 8
209 <211> LENGTH: 21
210 <212> TYPE: PRT
211 <213> ORGANISM: Human
213 <400> SEQUENCE: 8
214  Gln Gln Trp Glu Arg Thr Tyr Leu Gly Asn Val Leu Val Cys Thr Cys
215      1              5              10              15
216  Tyr Gly Gly Ser Arg
217              20
219 <210> SEQ ID NO: 9

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/581,651

DATE: 08/02/2001

TIME: 17:26:52

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\08022001\I581651.raw

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220 <211> LENGTH: 39
221 <212> TYPE: PRT
222 <213> ORGANISM: Human
224 <400> SEQUENCE: 9
225  Glu Pro Cys Val Leu Pro Phe Thr Tyr Asn Gly Arg Thr Phe Tyr Ser
226    1             5             10             15
227  Cys Thr Thr Glu Gly Arg Gln Asp Gly His Leu Trp Cys Ser Thr Thr
228             20             25             30
229  Ser Asn Tyr Glu Gln Asp Gln
230             35
232 <210> SEQ ID NO: 10
233 <211> LENGTH: 21
234 <212> TYPE: PRT
235 <213> ORGANISM: Human
237 <400> SEQUENCE: 10
238  Cys Thr Asp His Thr Val Leu Val Gln Thr Gln Gly Gly Asn Ser Asn
239    1             5             10             15
240  Gly Ala Leu Cys His
241             20
243 <210> SEQ ID NO: 11
244 <211> LENGTH: 21
245 <212> TYPE: PRT
246 <213> ORGANISM: Human
248 <400> SEQUENCE: 11
249  Val Gly Asn Gly Arg Gly Glu Trp Thr Cys Tyr Ala Tyr Ser Gln Leu
250    1             5             10             15
251  Arg Asp Gln Cys Ile
252             20
254 <210> SEQ ID NO: 12
255 <211> LENGTH: 20
256 <212> TYPE: PRT
257 <213> ORGANISM: Human
259 <400> SEQUENCE: 12
260  Ile Ser Lys Tyr Ile Leu Arg Trp Arg Pro Lys Asn Ser Val Gly Arg
261    1             5             10             15
262  Trp Lys Glu Ala
263             20
265 <210> SEQ ID NO: 13
266 <211> LENGTH: 11
267 <212> TYPE: PRT
268 <213> ORGANISM: Human
270 <400> SEQUENCE: 13
271  Thr Ala Ser Gly Val Ala Glu Thr Thr Asn Cys
272    1             5             10
274 <210> SEQ ID NO: 14
275 <211> LENGTH: 24
276 <212> TYPE: PRT
277 <213> ORGANISM: Artificial Sequence
279 <220> FEATURE:

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<210> 14
 <211> 24
 <212> PRT
 <213> Artificial Sequence

<220>

Description of Artificial
 Sequence is mandatory in
 Field 223

<400> 14
 Glu Pro Cys Val Leu Pro Phe Thr Tyr Asn Asp Arg Thr Asp Ser Thr
 1 5 10 15
 Thr Ser Asn Tyr Glu Gln Asp Gln
 20

<210> 15
 <211> 21
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> blank

VERIFICATION SUMMARY

DATE: 08/02/2001

PATENT APPLICATION: US/09/581,651

TIME: 17:26:53

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\08022001\I581651.raw

L:281 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION: